

**Claims**

1. A method for removing computer viruses comprising the steps of:

5           (A) if a function to be used to search information about areas infectable by viruses has been changed, restoring the function to be in a normal state thereof; and

             (B) carrying out a procedure for scanning of infection and a disinfection procedure for processes residing in a memory and associated files scanned using a normal function.

10           2. The method according to claim 1, wherein the normal function at the step (B) is the function determined to be unchanged, or restored using a previously-stored function when the function is determined to be changed.

             3. The method according to claim 1, wherein the step (B) comprises the steps of:

15           scanning a process residing in the memory;

             determining whether or not the infected process is disinfectable, and disinfecting the process when it is determined that the infected process is disinfectable, while killing the process when it is determined that the infected process cannot be disinfected; and

20           searching for a file associated with the infected process, and scanning and disinfecting the searched file.

             4. The method according to claim 1, wherein the procedure for scanning of infection and the disinfection procedure are further carried out for thread areas of the memory.

25           5. The method according to claim 4, wherein the step (B) comprises the steps of:

             scanning a process residing in the memory;

             determining whether or not the infected process is disinfectable, and disinfecting the process when it is determined that the infected process is

disinfectable, while killing the process when it is determined that the infected process cannot be disinfected;

searching for a file associated with the process, and scanning and disinfecting the searched file; and

5 scanning and disinfecting the thread areas of the memory.

6. The method according to claim 4, wherein the step (B) comprises the steps of:

scanning and disinfecting the thread areas of the memory;

scanning a process residing in the memory;

10 determining whether or not the infected process is disinfectable, and disinfecting the process when it is determined that the infected process is disinfectable, while killing the process when it is determined that the infected process cannot be disinfected; and

15 searching for a file associated with the process, and scanning and disinfecting the searched file.

7. The method according to claim 1, wherein the function is provided by DOS, Macintosh, Windows, OS/2, Unix, or Linux.

8. The method according to claim 1, wherein the function is an application program interface (API) function or a system call.

20 9. A computer-readable storage medium recorded with a program for executing the steps of:

(A) if a function to be used to search information about areas infectable by viruses has been changed, restoring the function to be in a normal state thereof; and

(B) carrying out a procedure for scanning of infection and a disinfection procedure for processes residing in a memory and associated files scanned using a normal function.

25 10. The computer-readable storage medium according to claim 9,

wherein the normal function at the step (B) is the function determined to be unchanged, or restored using a previously-stored function when the function is determined to be changed.

11. The computer-readable storage medium according to claim 9,  
5 wherein the step (B) comprises the steps of:

scanning a process residing in the memory;

determining whether or not the infected process is disinfectable, and  
disinfecting the process when it is determined that the infected process is  
disinfectable, while killing the process when it is determined that the process  
cannot be disinfected; and

10 searching for a file associated with the infected process, and scanning  
and disinfecting the searched file.

12. The computer-readable storage medium according to claim 9,  
15 wherein the procedure for scanning of infection and the disinfection  
procedure are further carried out for thread areas of the memory.

13. The computer-readable storage medium according to claim 12,  
wherein the step (B) comprises the steps of:

scanning a process residing in the memory;

20 determining whether or not the infected process is disinfectable, and  
disinfecting the process when it is determined that the infected process is  
disinfectable, while killing the process when it is determined that the infected  
process cannot be disinfected;

searching for a file associated with the infected process, and scanning  
and disinfecting the searched file; and

25 scanning and disinfecting the thread areas of the memory.

14. The computer-readable storage medium according to claim 12,  
wherein the step (B) comprises the steps of:

scanning and disinfecting the thread areas of the memory;

scanning a process residing in the memory;

determining whether or not the infected process is disinfectable, and disinfecting the process when it is determined that the infected process is disinfectable, while killing the process when it is determined that the infected process cannot be disinfected; and

5 searching for a file associated with the process, and scanning and disinfecting the searched file.

15. The computer-readable storage medium according to claim 9, wherein the function is an application program interface (API) function or a system call.

10 16. A virus-removing apparatus comprising:

restoring means for restoring a function to be used to search information about areas infectable by viruses when the function has been changed;

15 process disinfecting means for searching for a list of processes residing in a memory by use of the function in a normal state, and an entry point of each of the process, scanning a memory page, starting from the entry point of an associated one of the processes, thereby checking whether or not the associated process is infected by viruses, the process disinfecting means carrying out a procedure for disinfecting the associated process when the associated process has been infected; and

20 20 file disinfecting means for searching for a file associated with each of the infected processes, scanning and disinfecting the searched file.

17. The virus-removing apparatus according to claim 16, further comprising:

25 thread disinfecting means for scanning and disinfecting thread areas of the memory.

18. The virus-removing apparatus according to claim 16, wherein the function is provided by DOS, Macintosh, Windows, OS/2, Unix, or Linux.

19. The virus-removing apparatus according to claim 16, wherein the function is an application program interface (API) function or a system call.

20. The virus-removing apparatus according to claim 16, wherein the virus-removing apparatus is a hardware device applied to a personal computer (PC), a personal digital assistant (PDA), a mobile phone, and industrial equipment including semiconductor manufacturing equipment.  
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